Claims

[c1] What is claimed is:

1. A method of communicating data comprising:
providing a first peer and a second peer;
successively transmitting a first predetermined number of more than one identical instances of a data block with a first transmitter of the first peer;
receiving at least two of the first predetermined number of identical instances of the data block with a second receiver of the second peer; and
combining more than one corrupted received data blocks to form a complete instance of the data block at the second peer.

[c2] 2. The method of claim 1 wherein combining more than one corrupted received data blocks to form a complete instance of the data block at the second peer further comprises:
transmitting a response to the complete instance of the data block with a second transmitter of the second peer.

[c3] 3. The method of claim 2 further comprising:
successively transmitting a second predetermined number of more than one identical instances of the response

with the second transmitter of the second peer.

[c4] 4. The method of claim 3 wherein the second predetermined number is an odd number.

[c5] 5. The method of claim 1 wherein successively transmitting a first predetermined number of more than one identical instances of a data block with a first transmitter of the first peer further comprises:
correctly receiving an expected response of the data block with a first receiver of the first peer; and
disabling the successive transmission of the data block of the first transmitter of the first peer.

[c6] 6. The method of claim 5 wherein the expected response is a positive acknowledgment of the data block.

[c7] 7. The method of claim 5 wherein the expected response is in a group of possible responding messages of the data block.

[c8] 8. The method of claim 1 wherein said successive transmitting and said receiving are performed over a dedicated channel shared only by the first and second peers.

[c9] 9. The method of claim 1 wherein combining more than one corrupted received data blocks comprises taking a rounded arithmetic average for each bit of these received

data blocks.

[c10] 10. The method of claim 1 wherein the number of combined corrupted received data blocks is an odd number.

[c11] 11. The method of claim 10 wherein combining more than one corrupted received data blocks comprises performing a majority vote for each bit among these received data blocks.

[c12] 12. The method of claim 1 wherein the first predetermined number is an odd number.

[c13] 13. A transmitting peer of a communications system comprising:
a first antenna coupled to a second antenna of a receiving peer via a transmission medium;
a first transmitter electrically connected to the first antenna for transmitting data blocks;
a first receiver electrically connected to the first antenna for receiving a response from the receiving peer;
a first processor electrically connected to the first transmitter for controlling the first transmitter to successively transmit a first predetermined number of more than one identical instances of a data block via the first antenna; and
a first power supply electrically connected to the first

transmitter and the first processor.

[c14] wherein the first processor is capable of detecting an expected response of the data block at the first receiver, and accordingly disabling the successive transmission of identical instances of the data block at the first transmitter.

[c15] 14. The transmitting peer of claim 13 wherein the first antenna comprises two sets of antenna units, one electrically connected to the first transmitter and the other electrically connected to the first receiver.

[c16] 15. The transmitting peer of claim 13 wherein the expected response is a positive acknowledgment of the data block.

[c17] 16. The transmitting peer of claim 13 wherein the expected response is in a group of possible responding messages of the data block.

[c18] 17. The transmitting peer of claim 13 wherein the transmission medium is a dedicated channel of electromagnetic waves.

[c19] 18. The transmitting peer of claim 13 wherein the first predetermined number is an odd number.

[c20] 19. A receiving peer of a communications system com-

prising:

a second antenna coupled to a first antenna of a transmitting peer via a transmission medium;

a second receiver electrically connected to the second antenna for receiving data blocks;

a second processor electrically connected to the second receiver for combining more than one data blocks received successfully to form a complete instance of the data block; and

a second power supply electrically connected to the second receiver and the second processor.

[c21] 20. The receiving peer of claim 19 wherein the transmission medium is a dedicated channel of electromagnetic waves.

[c22] 21. The receiving peer of claim 19 wherein the second processor is capable of taking a rounded arithmetic average for each bit of received data blocks when combining more than one corrupted received data blocks.

[c23] 22. The receiving peer of claim 19 wherein the number of combined corrupted received data blocks is an odd number.

[c24] 23. The receiving peer of claim 22 wherein the second processor is capable of performing a majority vote for

each bit among the received data blocks when combining more than one corrupted received data blocks.

[c25] 24. The receiving peer of claim 19 wherein the second processor further comprises a second transmitter for transmitting a response to the transmitting peer.

[c26] 25. The receiving peer of claim 24 wherein the second transmitter is capable of successively transmitting a second predetermined number of more than one identical instances of the response.

[c27] 26. The receiving peer of claim 25 wherein the second predetermined number is an odd number.